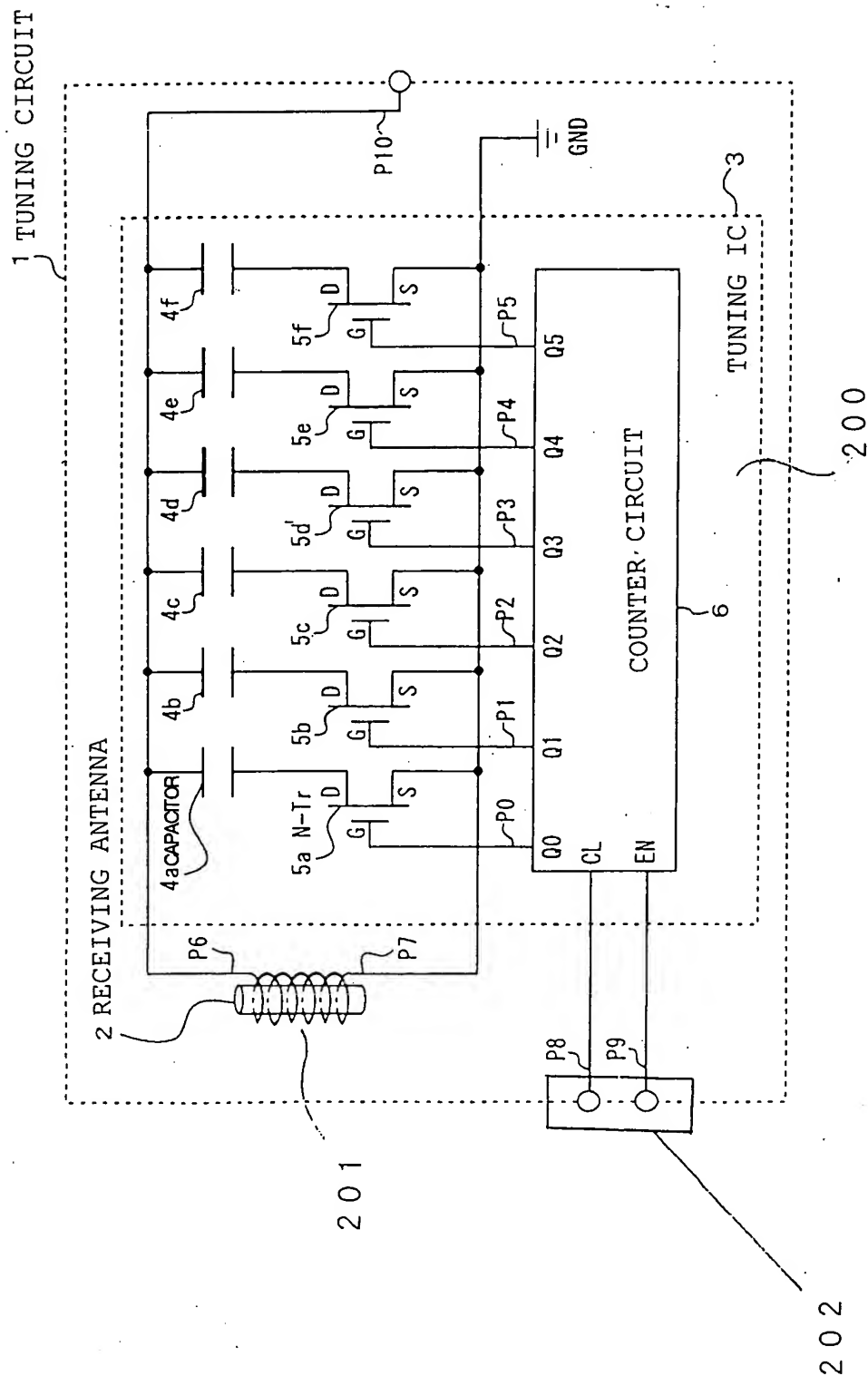


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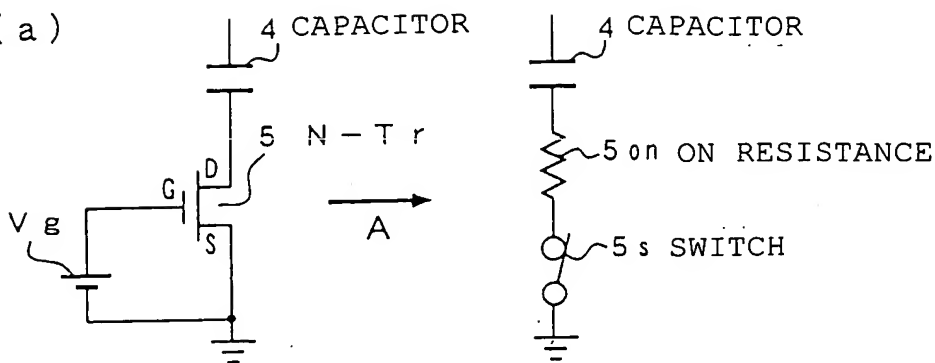
Fig. 1



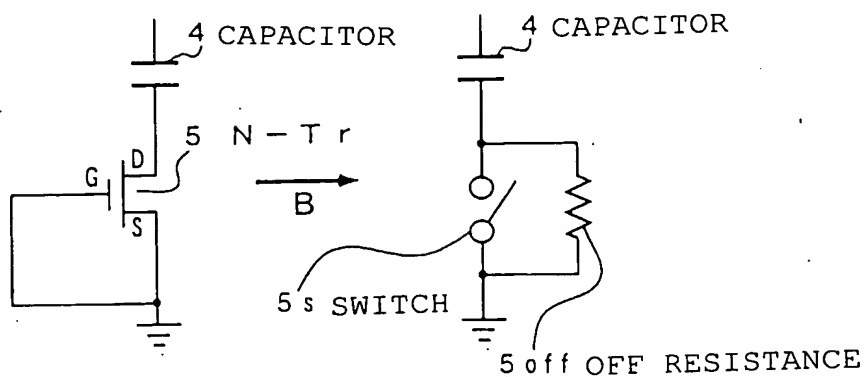
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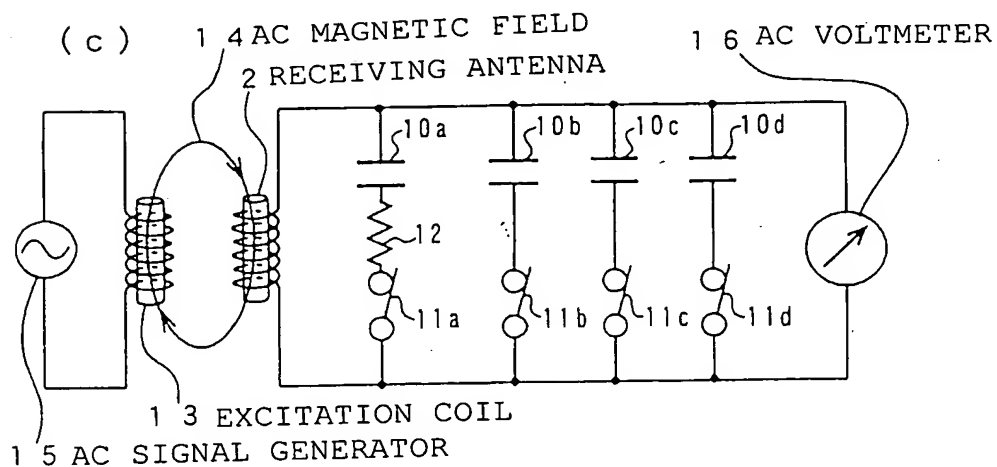
Fig. 2 (a)



(b)



(c)

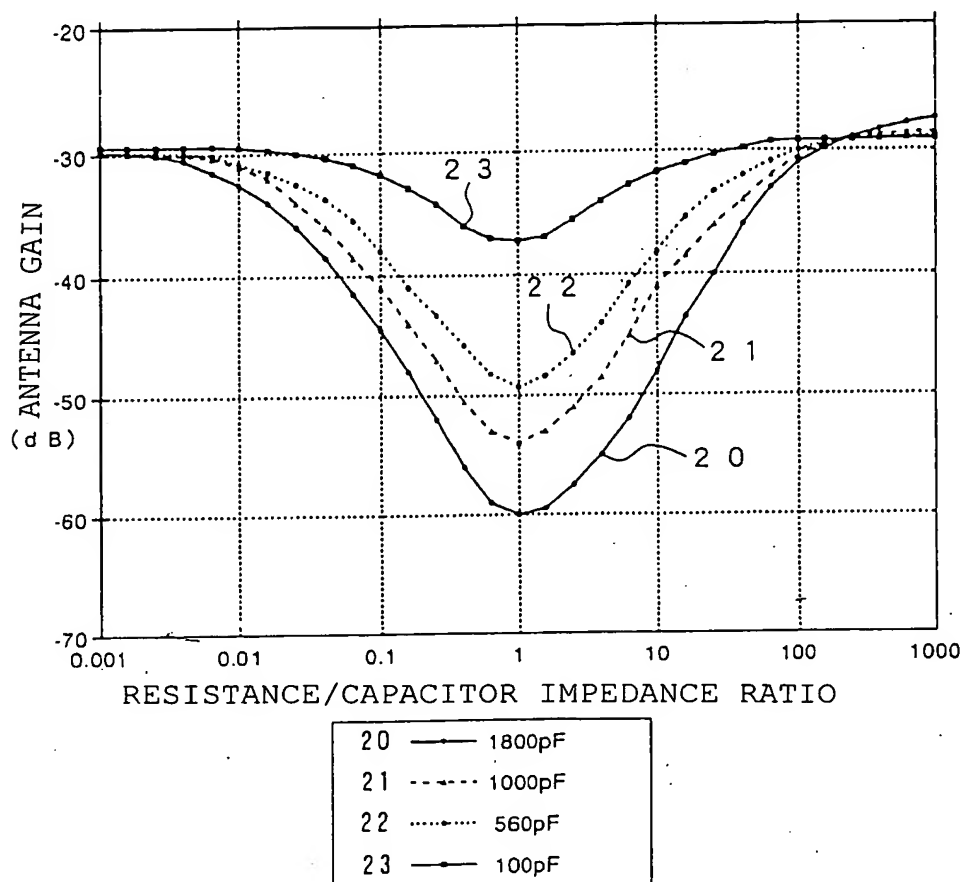


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Fig. 3

IMPEDANCE RATIO VERSUS ANTENNA GAIN CHARACTERISTICS



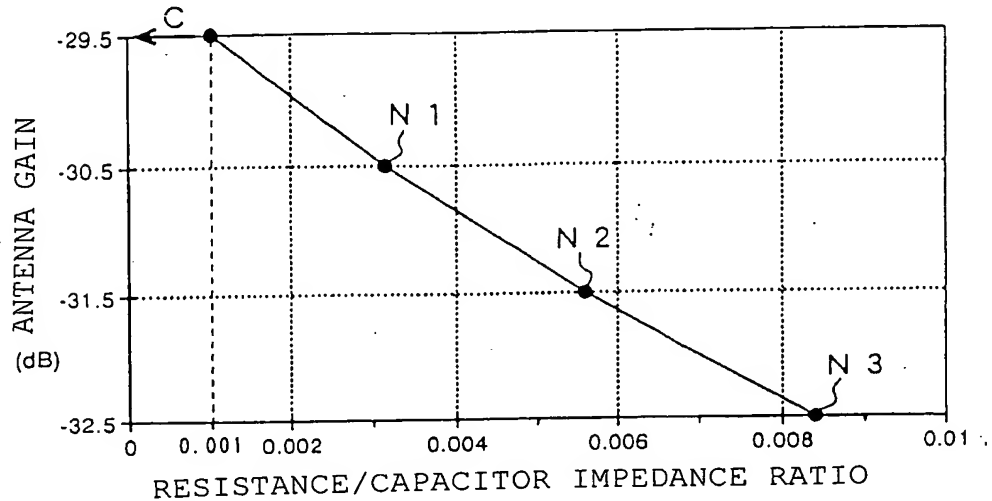
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Fig. 4

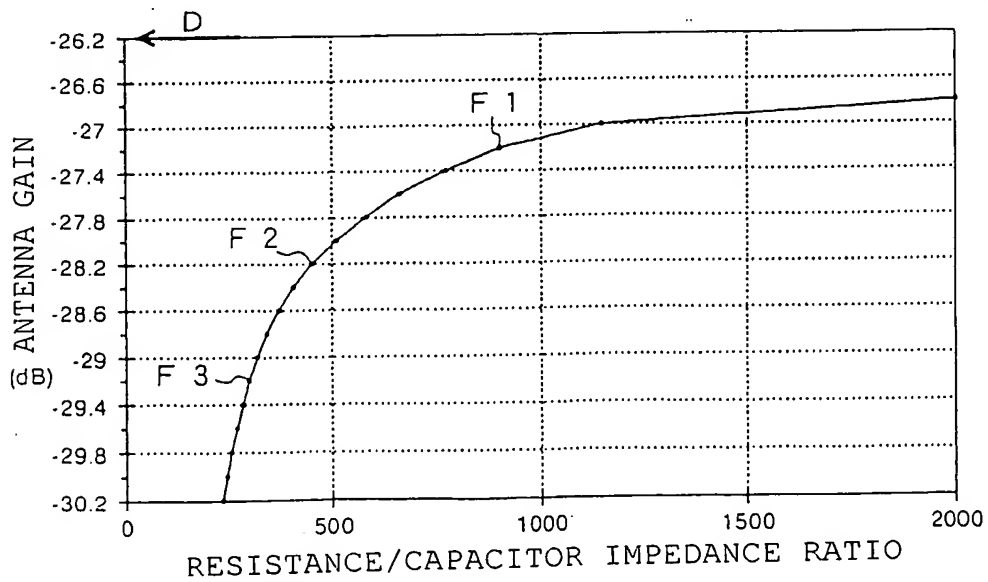
(a)

IMPEDANCE RATIO VERSUS ANTENNA GAIN CHARACTERISTICS
 (ON RESISTANCE REGION)



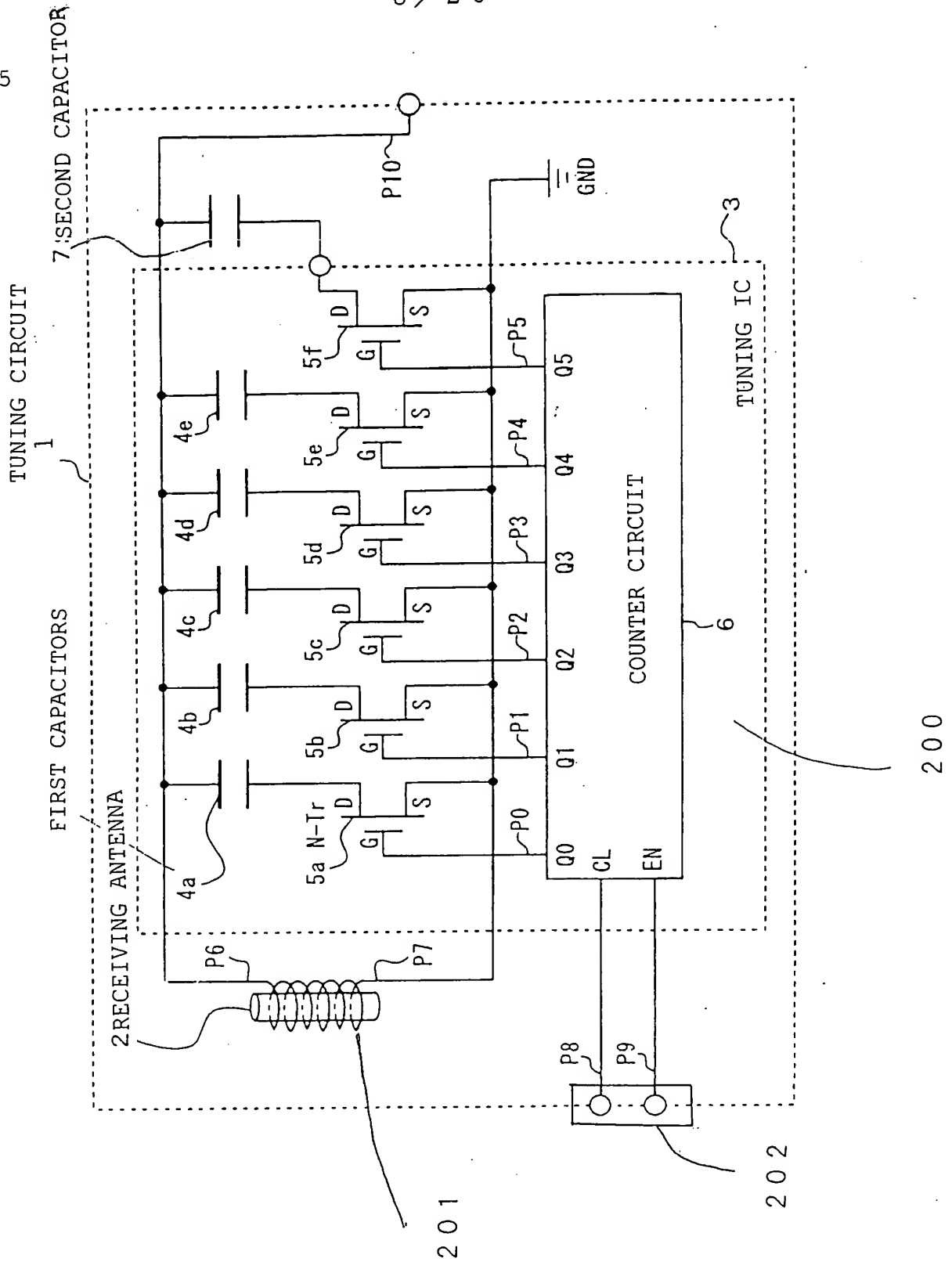
(b)

IMPEDANCE RATIO VERSUS ANTENNA GAIN CHARACTERISTICS
 (OFF RESISTANCE REGION)



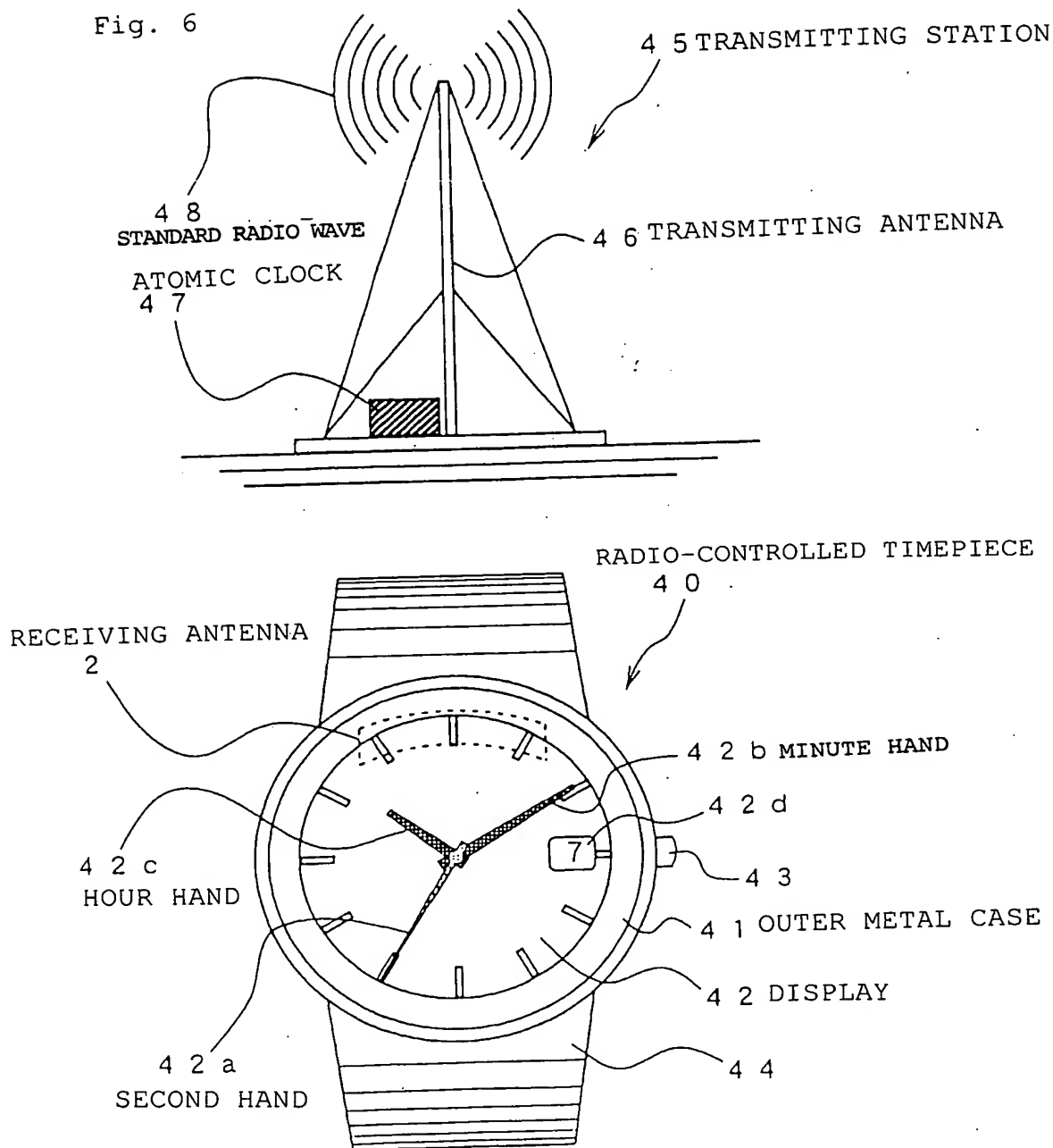
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Fig. 5



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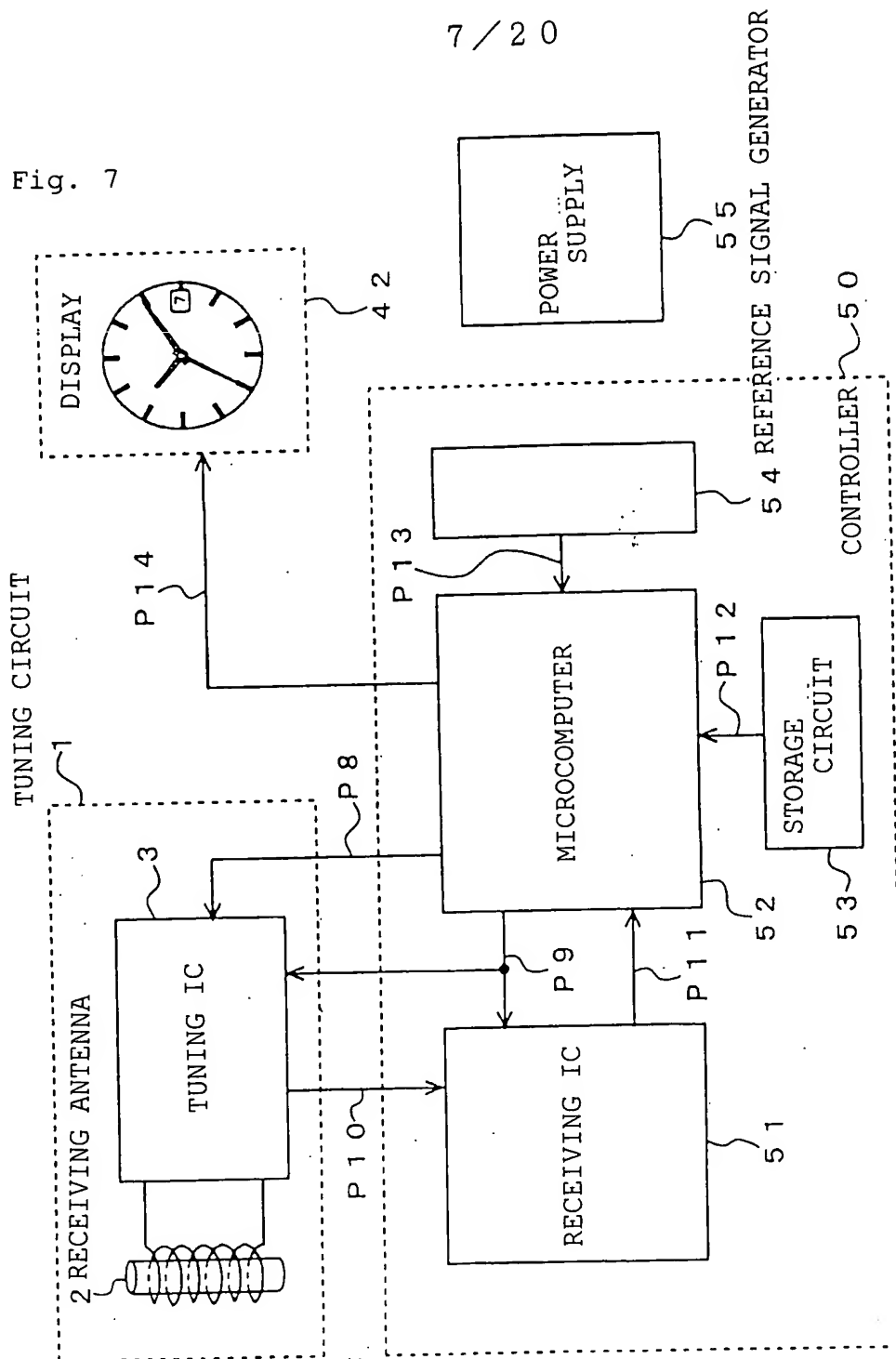
Fig. 6



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Fig. 7



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Fig. 8

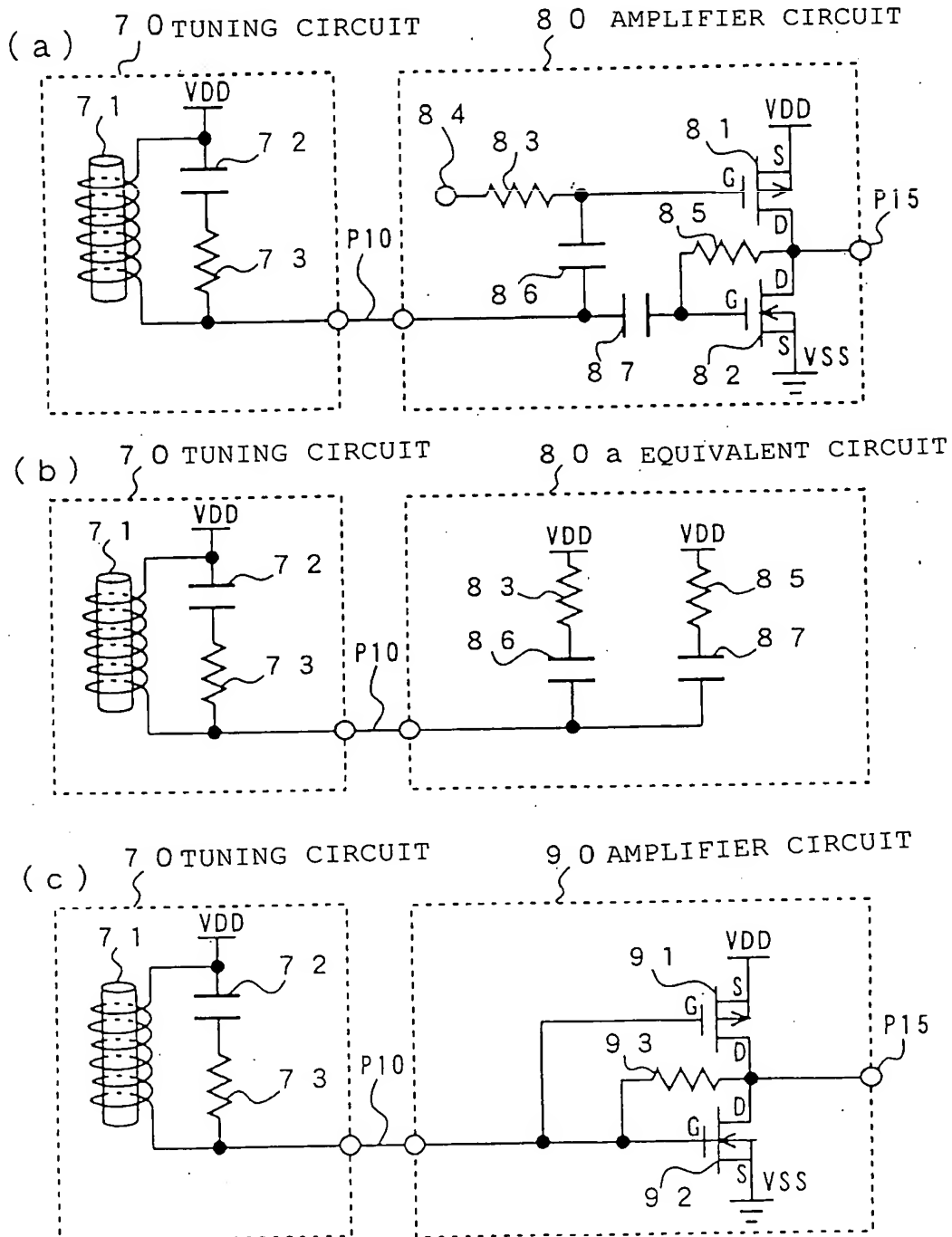
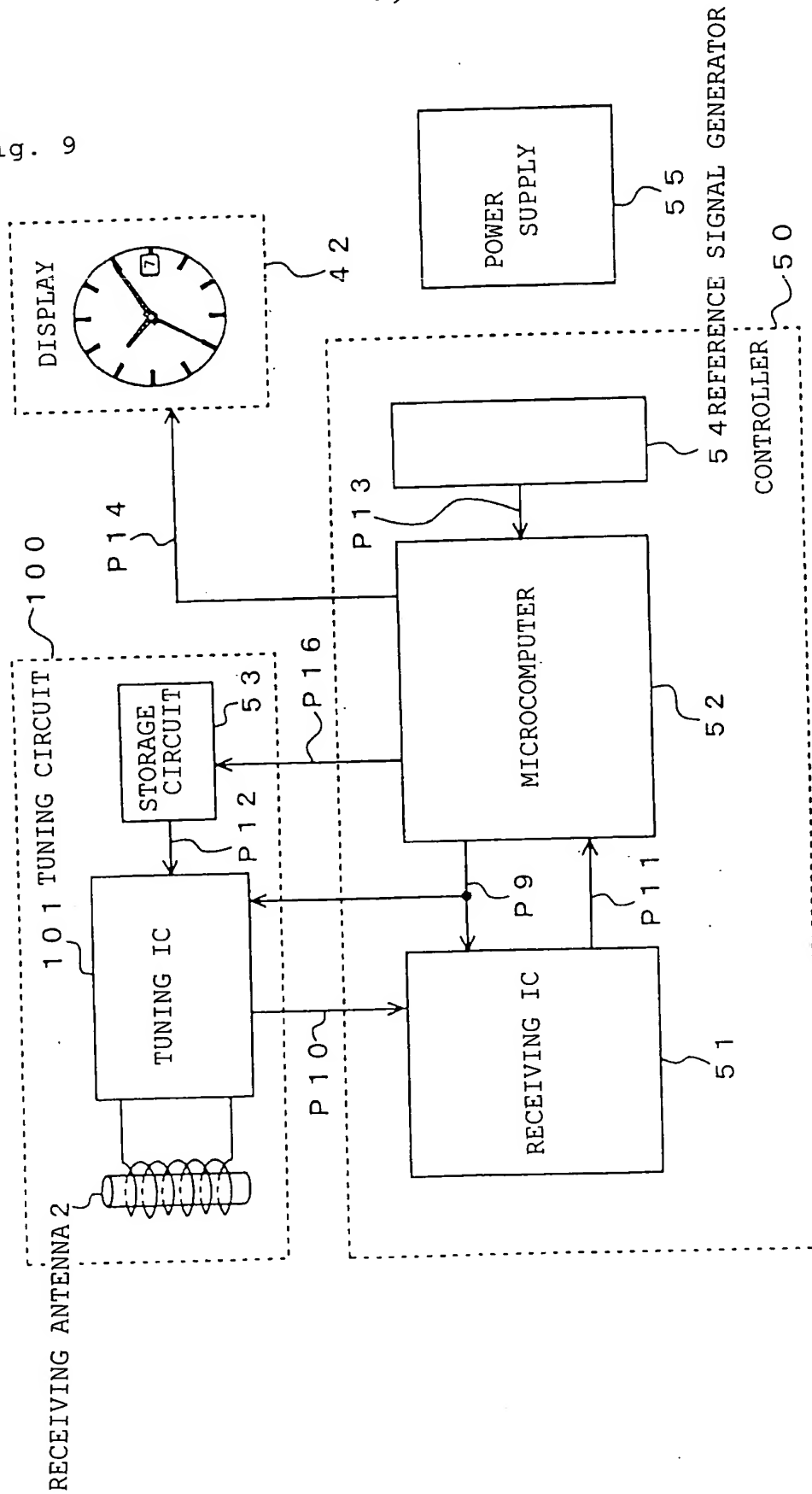


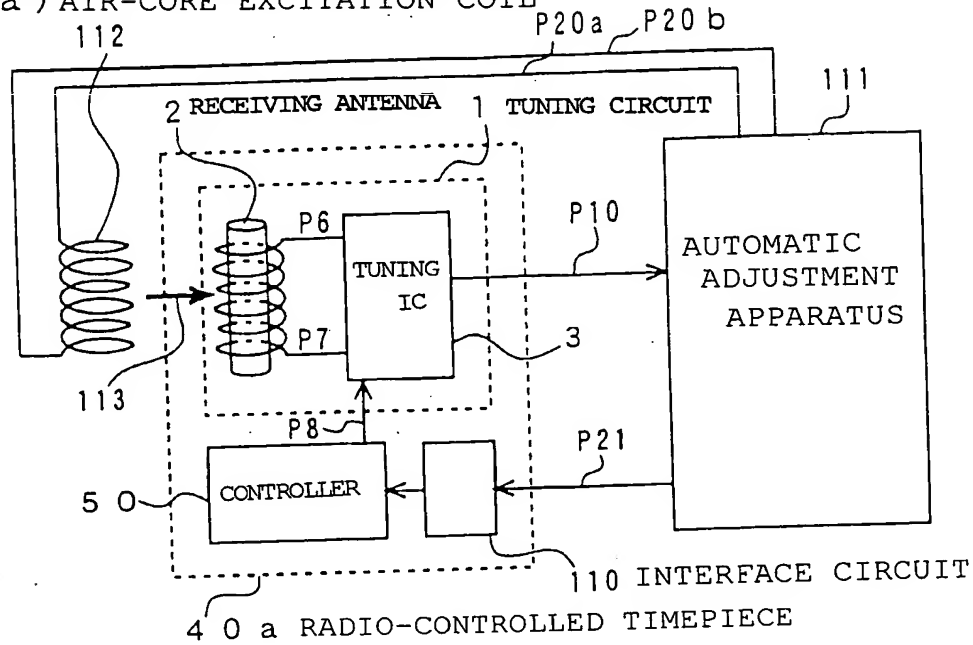
Fig. 9



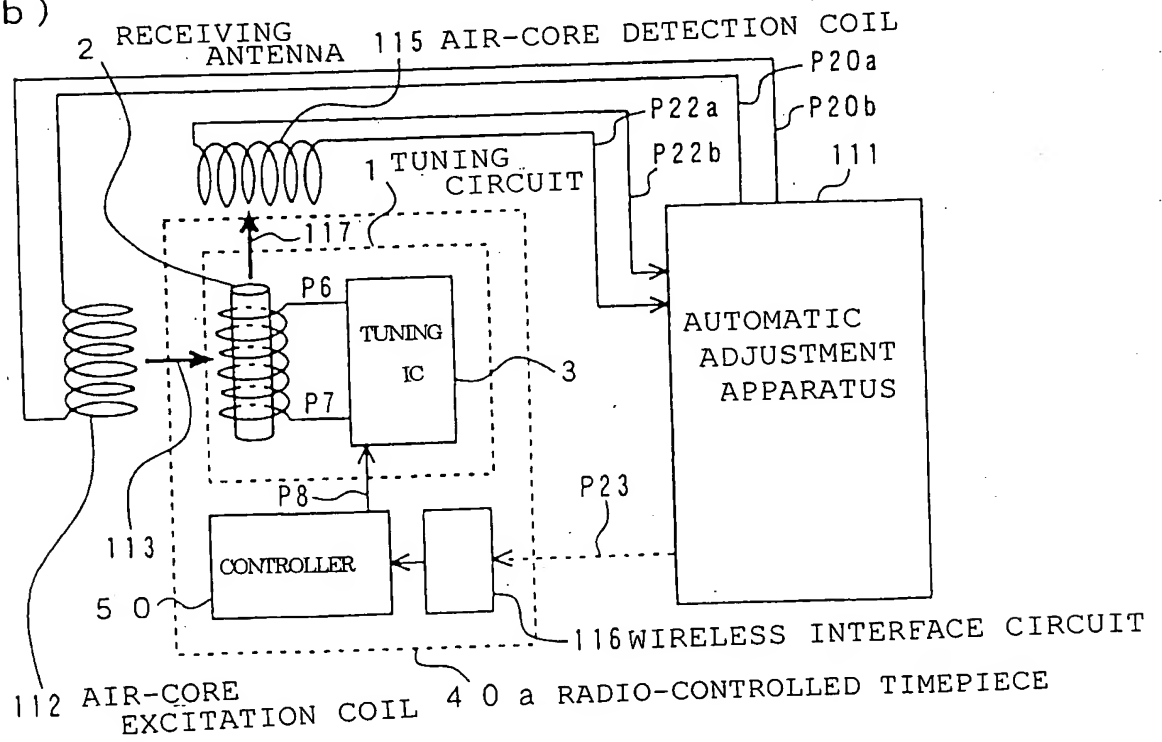
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Fig. 10

(a) AIR-CORE EXCITATION COIL



(b)



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Fig. 11 ANTENNA OUTPUT CHARACTERISTICS

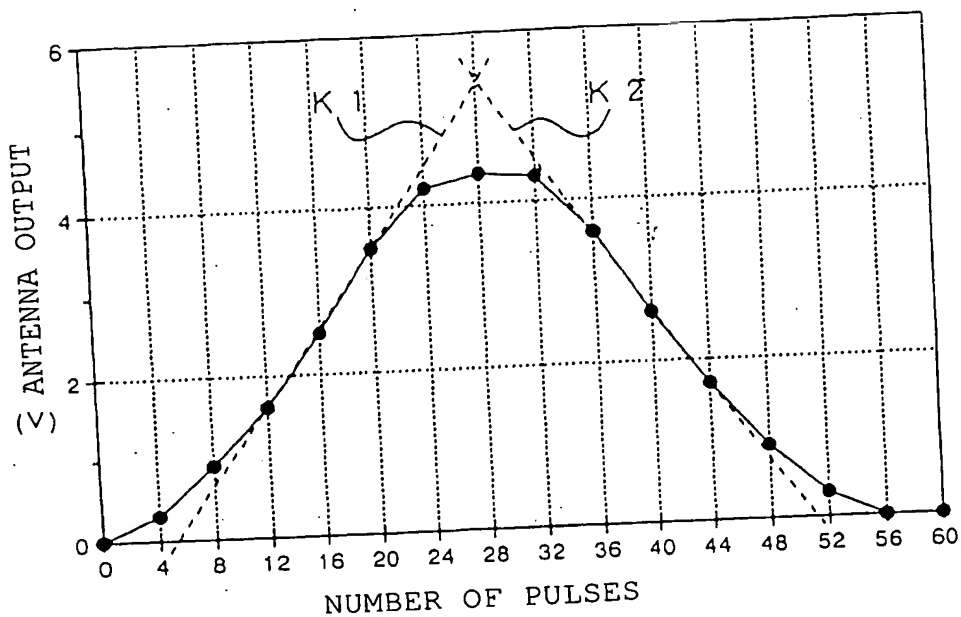
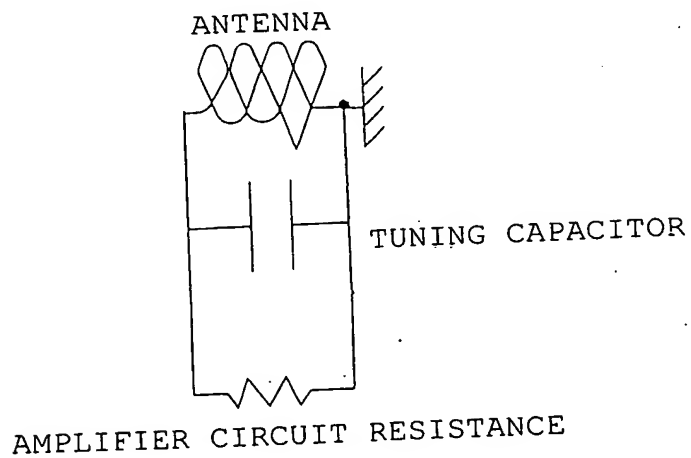


Fig. 23



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Fig. 12

PRIOR ART

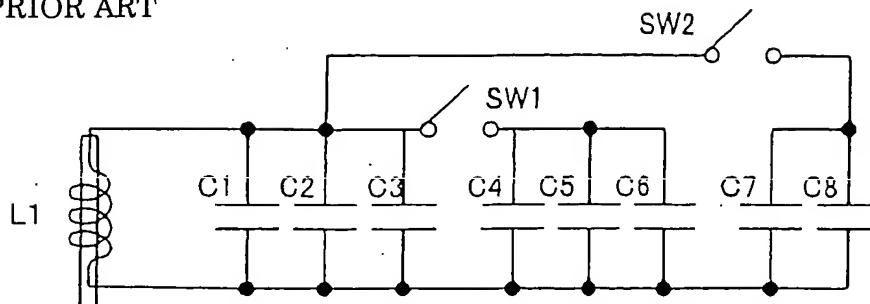
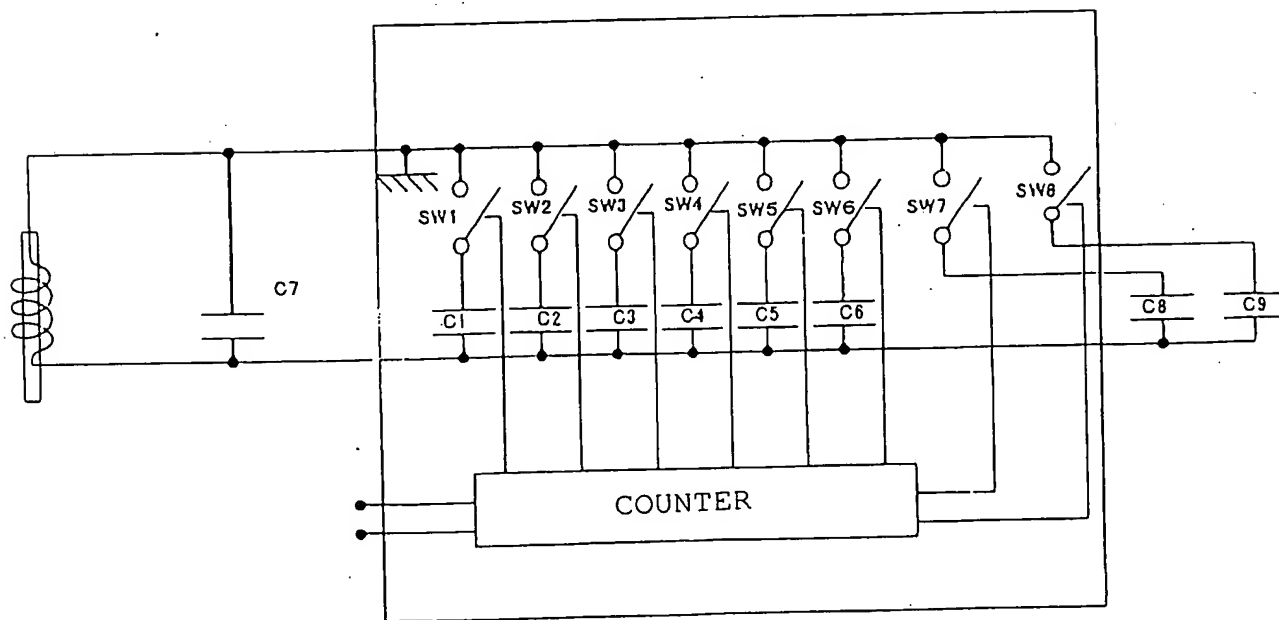


Fig. 13

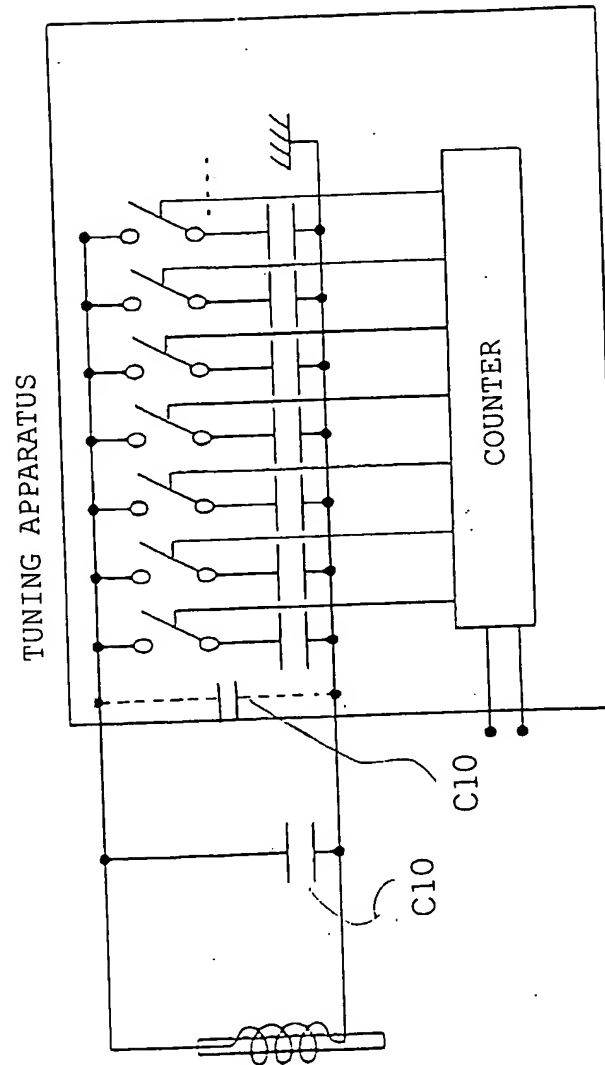
TUNING CIRCUIT



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Fig. 14



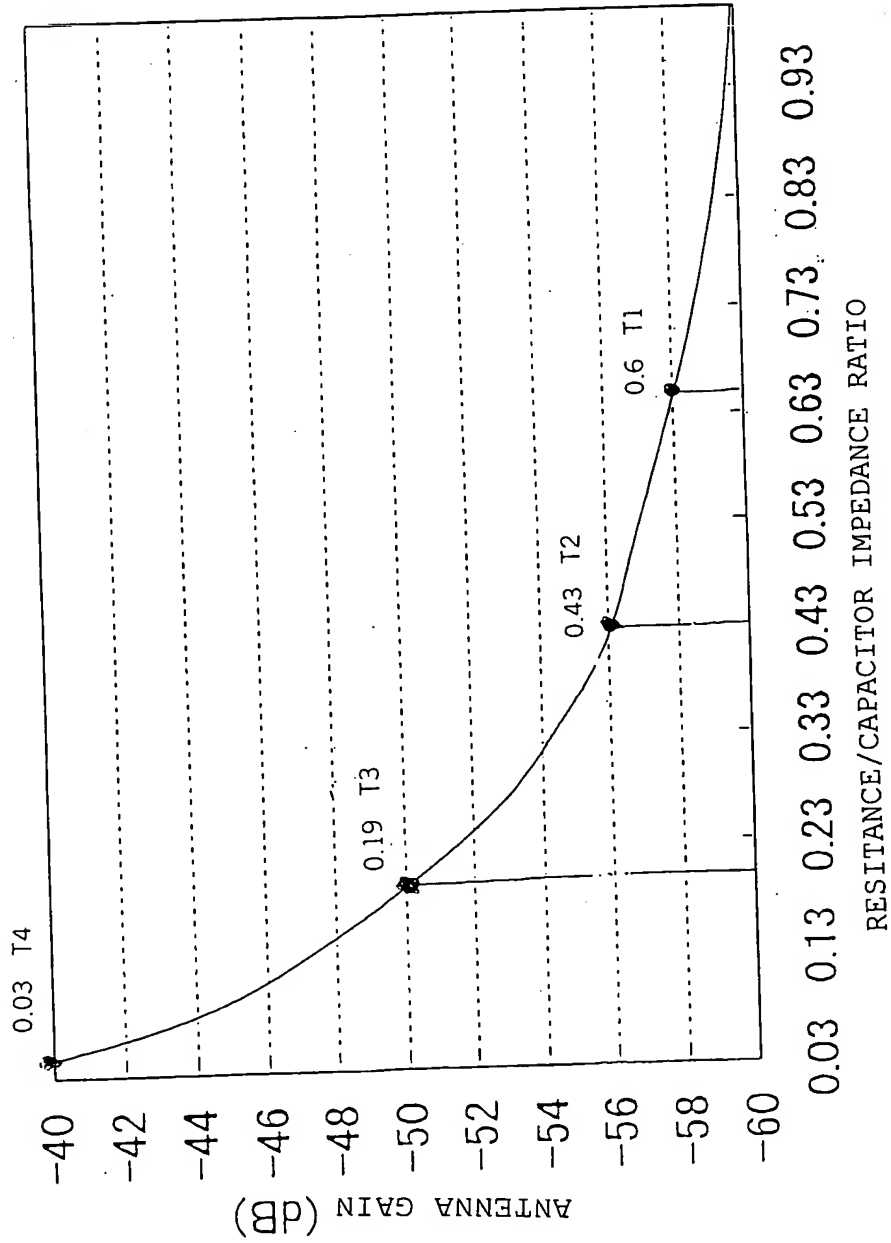
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— 1800pF

Fig. 15

RESISTANCE/CAPACITOR IMPEDANCE RATIO VERSUS ANTENNA GAIN CHARACTERISTICS



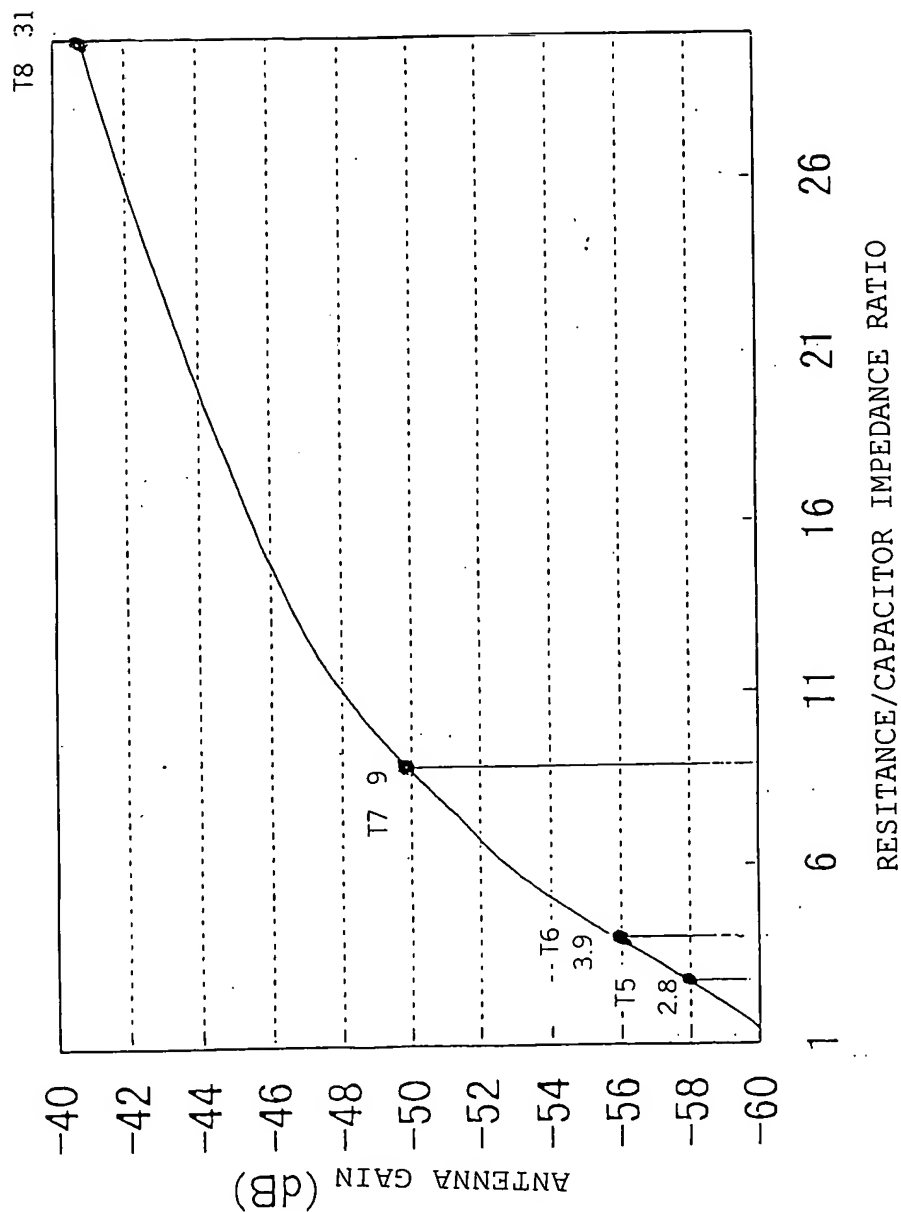
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— 1800pF

Fig. 16

RESISTANCE/CAPACITOR IMPEDANCE RATIO VERSUS ANTENNA GAIN CHARACTERISTICS



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Fig. 17

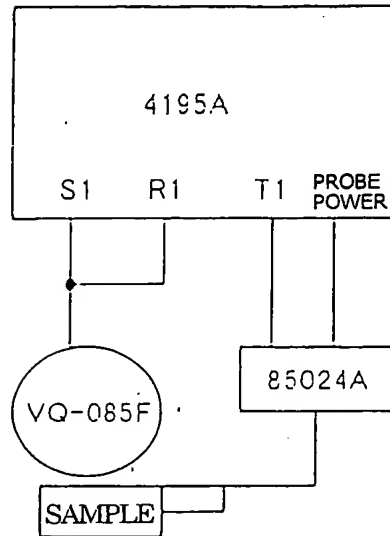


Fig. 18

ANTENNA-TO-SAMPLE DISTANCE

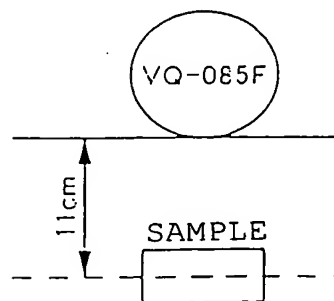
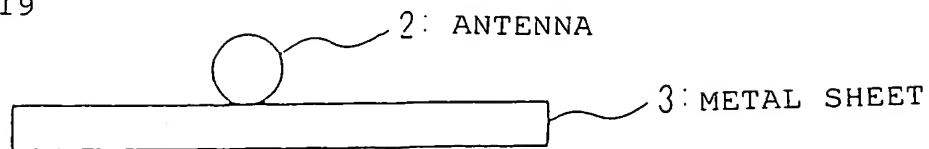


Fig. 19

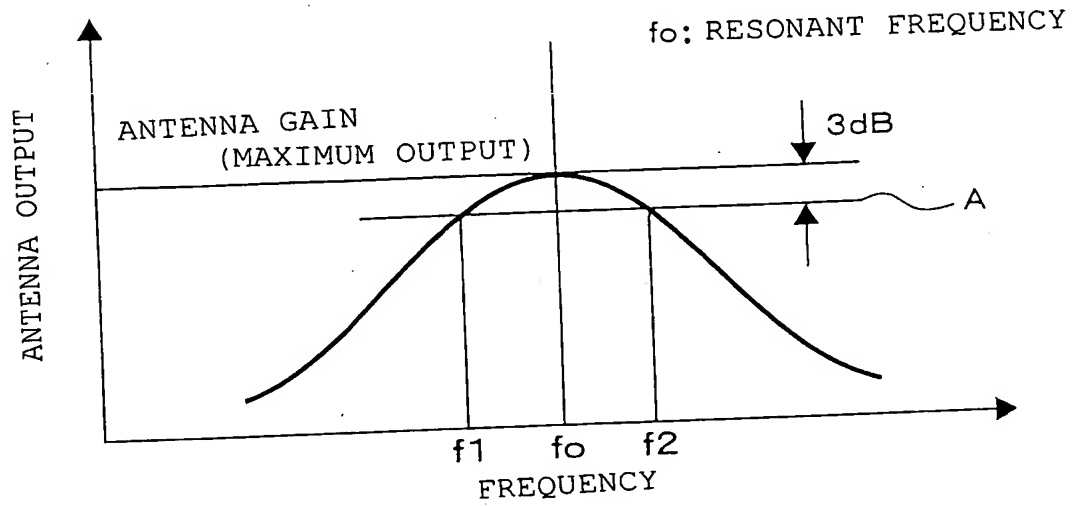


DISTANCE FROM ANTENNA TO METAL SHEET: 0mm

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RESONANT ANTENNA OUTPUT CHARACTERISTICS

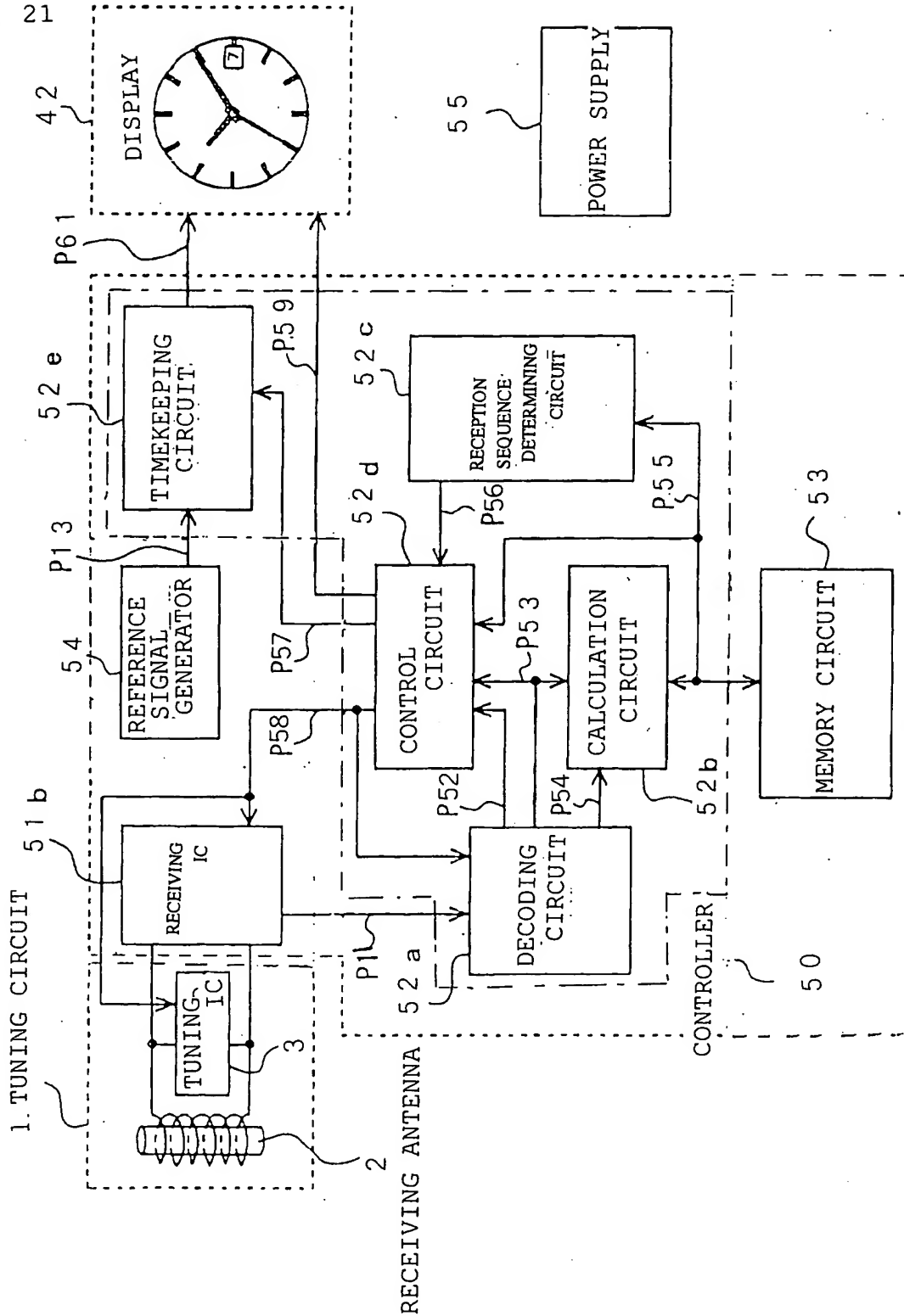
Fig. 20



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Fig. 21



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Fig. 22 RECEPTION HISTORY INFORMATION TABLE

ADDRESS	RECEIVED STATION NAME	RECEPTION PROCESSING TIME	RECEIVED LEVEL
1	JJY FUKUSHIMA	3 MINUTES	H
2	JJY KYUSHU	6 MINUTES	H
3	JJY KYUSHU	5 MINUTES	M
4	RECEPTION ERROR	--	---
5	DCF77	8 MINUTES	L
6	DCF77 (77.5 kHz)	7 MINUTES	M
7	WWVB	5 MINUTES	M
8	JJY FUKUSHIMA	2 MINUTES	H
9	JJY FUKUSHIMA	5 MINUTES	H
10	JJY KYUSHU (60 kHz)	4 MINUTES	M
11	WWVB (60 kHz)	10 MINUTES	L
12	JJY FUKUSHIMA (40 kHz)	6 MINUTES	M
.	.	.	.
.	.	.	.
N	.	.	.

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Fig. 24

